5 FAH-5 H-400
QUALITY ASSURANCE

5 FAH-5 H-410
QUALITY ASSURANCE DISCIPLINE

(CT:ITS-4; 06-21-2012)
(Office of Origin: IRM/BMP/GRP/GP)
(Updated only to revise Office of Origin)

5 FAH-5 H-411 QUALITY ASSURANCE DISCIPLINE

(TL:ITS-1; 02-13-2002)

a. The Quality Assurance (QA) discipline provides a mechanism that stipulates all products developed will meet specific Department of State documented requirements.

b. QA provides a framework from which to monitor the requirements and specifications. It helps to ensure that project guidelines, policies, and procedures are being followed in the development of services and products. The QA discipline includes a comprehensive QA plan that defines the best practices documented by the Department. QA procedures will specifically define various techniques, practices, and processes in conjunction with reviews, audits, and inspections.

c. Managers must adhere to the guidelines concerning acquisition reform standards for contractors (see 5 FAM 614), and include these standards in a QA contract plan.

5 FAH-5 H-412 QUALITY ASSURANCE PLAN

(TL:ITS-1; 02-13-2002)

a. Provide a well-documented QA plan during project initiation to ensure that the development of the project follows established project guidelines for producing a complete, accurate, and easily understood product within

the framework of the life cycle model. This plan will provide monitoring and review techniques that QA will employ throughout the life cycle (see 5 FAH-5 Exhibit H-412).

b. Tailor the QA plan to individual projects in accordance with the project plan. Update the QA plan each time the project plan is updated to ensure consistency of activities and control gates.

c. A QA plan that has been produced for a contract should also adhere to the recent guidelines for performance-based contracting. Incorporate any changes or deviations from a QA contract plan into the project QA plan.

5 FAH-5 H-413 REVIEWS AND EVALUATIONS

(TL:ITS-1; 02-13-2002)

a. The QA function will be effective if it works with all of the project's functions to build in quality reviews and audits over the course of the product's development. QA must have the support of Department of State upper management as well as project management for QA evaluations to be meaningful and acted upon.

b. The QA manager ensures that all activities that take place during the life of the project are in compliance with the QA plan, standards, and procedures that have been defined for the project. Products and activities must be evaluated and scheduled audits and reviews should focus on products and/or processes.

c. The QA input to the project plan should focus on the following:

(1) Defining the scope of the authority that QA has on the project;

(2) Describing the products and activities that will be reviewed by QA;

(3) Defining the standards to be used as the basis for QA evaluations;

(4) Defining the steps to follow while performing audits and reviews

(5) Developing a schedule for audits to take place;

(6) Defining the organizational structure of QA's reporting channel; and

(7) Describing how problems will be addressed that cannot be resolved.

d. Use established QA control gates in the QA plan to record and report the results of the evaluation process.

5 FAH-5 H-414 QUALITY ASSURANCE LIFE CYCLE MANAGEMENT

(TL:ITS-1; 02-13-2002)

Perform QA throughout the development effort to implement and execute timely evaluation of risks and other factors that could affect the quality of the process and/or the product. See 5 FAH-5 Exhibit H-414 Quality Assurance Life Cycle Management for a crosswalk between MSP and life cycle management.

5 FAH-5 H-415 STUDY PERIOD

(TL:ITS-1; 02-13-2002)

a. QA during the study period conducted by the sponsors, users, and project team defines the new system or changes to an existing system. The project team develops the project plan, which establishes the standards and procedures to conduct the project. QA ensures that the tasks are accomplished properly. The main concern during the study period is the QA plan. This plan supports the project plan and identifies and defines the mechanisms which ensure that quality is built into the system.

b. The QA results should support the functional requirement review and determine advancement to the next phase.

c. During the study period QA also provides the management plan to the QA section. See 5 FAH-5 Table 415 for a summary of the QA planning activities during the study period.

5 FAH-5 Table H-415
Quality Assurance Planning Activities

PURPOSE (Study Period)	ACTIVITY (Project Initiation)
Assessment Request (AR) and/or Change Request (CR)	QA conducts the review in accordance with the (AR/CR) QA Checklist (see 5 FAH-5 Exhibit H-415(1).
Risk Analysis	QA conducts the review in accordance with the risk analysis QA checklist (see 5 FAH-5 Exhibit H-415(2).
Feasibility Study and Benefit	The feasibility study and the BCA are

and/or Cost Analysis	prepared according to this handbook in 5 FAH-5 H-600. QA conducts review of the feasibility study and BCA in accordance with the Feasibility Study QA Checklist (see 5 FAH-5 Exhibit H-415(3) and the Benefit and/or Cost Analysis QA Checklist (see 5 FAH-5 Exhibit H-415(4) respectively.
Project Plan	The QA Manager will assist the project manager in developing the project plan by: (1) Providing recommended tailoring of the organization's QA plan to meet project needs, resources, and schedule, and (2) Coordinating QA personnel availability for the project. QA conducts review of the Project Plan QA Checklist (see 5 FAH-5 Exhibit H-415.5).
Quality Assurance Plan	QA plans must be written for every project requiring a project plan. QA plans must be tailored to individual projects and must normally be created to parallel the project plan.
PURPOSE (Study Period)	**ACTIVITY (Requirements Analysis)**
Functional Requirements Specification (FRS)	Perform QA based on both the functional and non-functional requirements specified in the FRS. Conduct QA review of the FRS using the FSR QA Checklist (see 5 FAH-5 Exhibit H-415(6).
Acceptance Criteria	A key QA responsibility is to ensure that the acceptance criteria are consistent with the FRS and do not implicitly or explicitly change the requirements in the FRS. Use the QA acceptance criteria checklist to conduct the acceptance criteria review (see 5 FAH-5 Exhibit H-415(7).
Functional Requirements Review (FRR)	The QA process provides assistance to the program manager in regards to conducting the FRR.
Project Plan	Update the project plan created during the project initiation phase. QA focuses on the

	planned design activities. If the project manager has made changes to the project plan, then QA needs to focus on those areas. A full review must be conducted as defined by the project plan QA checklist. See 5 FAH-5 Exhibit H-415.5.
PURPOSE (Study Period)	**ACTIVITY (Preliminary Design)**
System and/or Subsystem Specification (SSS)	The SSS identifies and defines system components. QA conducts a review of the SSS using the system and/or subsystem specification QA checklist. The checklist consists of the following quality attributes: Identification, type, purpose, function, subordinates, dependencies, interface, and resources (see 5 FAH-5 Exhibit H-415(8).
Preliminary Design Review (PDR)	The PDR is conducted by the project manager. QA documents the PDR findings, decisions, and recommendations that become action items to which the project manager must respond before the SSS is finalized. By using the identification and purpose quality attributes in the SSS and the requirement reference numbers in FRS, QA can verify the traceability matrix prepared by the designers.
Project Plan	The project plan is updated after the preliminary design has been devised. QA's review of the project plan is similar to the review conducted during requirements analysis, although attention should be focused on the planned detailed design activities.

5 FAH-5 H-416 ACQUISITION PERIOD

(TL:ITS-1; 02-13-2002)

a. Acquisition should begin with the most effective resource planning. System specifications are developed and QA is performed to ensure system quality and attributes.

b. Perform QA to track requirements and conduct the necessary reviews and evaluations to document quality at various control gates. This action should be taken prior to acquiring resources.

c. Move to the next step only when QA controls and CM of all hardware and software items (including documentation) are in place. See 5 FAH-5 Table H-416 for QA planning activities during the acquisition period.

5 FAH-5 Table H-416
Quality Assurance Planning Activities

PURPOSE (Acquisition)	ACTIVITY (Detailed Design)
Program Specification (PS)	The PS reveals internal design, including inputs, outputs, plus data base and file specifications, as well as processing and performance characteristics for each design component identified in the preliminary design. **Design Quality Attributes** At a minimum QA must be performed to ensure that these attributes are addressed and documented for each component and subcomponent in the program specification. **Document Quality Attributes** The quality attributes identified for an SSS also apply to a program specification. Two additional quality attributes for a program specification are process and data. **Test Specification** Multiple tests are required for each module. Quality attributes of a module test include identification, description, assumptions, initialization, instrumentation, limitations, inputs, anticipated outputs, and output assessment. In addition to ensuring that the system's coupling and cohesion requirements, specified in the SSS, have been met and that tests for each program and module have been performed. QA is to review the program specification using the Program Specification QA Checklist (see 5

	FAH-5 Exhibit H-416(1)).
System Test Plan	After ensuring that the SSS and PS specifications have been met, perform QA on the system test using the System Test QA Checklist (see 5 FAH-5 Exhibit H-416(2)).
Conversion Plan	The conversion plan is used for both creation and significant modification activities. QA should ensure that the references are correct. Perform QA on the conversion plan using the conversion plan QA checklist (see 5 FAH-5 Exhibit H- 416(3)).

5 FAH-5 H-417 OPERATIONS AND MAINTENANCE PERIOD

(TL:ITS-1; 02-13-2002)

Perform QA:

(1) During implementation to ensure that the new system is available to users and operators while undergoing modification. QA plays a vital role in testing and ensuring that the product or service is functioning according to plan and that the results are in compliance with requirements;

(2) To ensure that the system built or modified is tested according to QA standards. Ensure that proper training is provided for users and that standards are in place in accordance with the planned operational environment; and

(3) To thoroughly examine the system and review acceptance and/or regression test reports to ensure that the tests conducted yield the expected results as planned. See 5 FAH-5 Table H-417 for planning activities and procedures during the operations and maintenance period.

5 FAH-5 Table H-417
Quality Assurance Planning Activities

PURPOSE (Operations & Maintenance)	ACTIVITY (Implementation)

User Manual **Operations Manual** **System Administration Manual** **Program Maintenance Manual**	QA verifies that the traceability matrix prepared by the implementation personnel have the following: (1) All user functions identified in each manual are shown in the matrix; (2) All PS components and subcomponents are shown in the matrix; (3) Each PS component and subcomponent is traceable to at least one user function; (4) Each user function is traceable to at least one PS component or subcomponent. QA does the review of manuals by using the (see 5 FAH-5 Exhibit H-417(1) User Manual QA Checklist, 5 FAH-5 Exhibit H-417(2) Operations Manual QA Checklist, 5 FAH-5 Exhibit H-417(3) System Administration Manual QA Checklist, 5 FAH-5 Exhibit H-417(4) Program Maintenance Manual QA Checklist).
System Test Report	QA conducts a review to verify the traceability matrix prepared by the implementation personnel and ensures that: (1) All tests identified in the system test plan are shown in the matrix; (2) All tests identified in the system test plan report are shown in the matrix; (3) Each test in the system test plan is traceable to a test in the system test report; (4) Each test in the system test report is traceable to a test in the system test plan. QA conducts a review of the system test report using the System Test Report QA Checklist (see 5 FAH-5 Exhibit H-417(5)).
Acceptance/Regression Test Report	QA must ensure that both the testing and the assessment of its results were conducted as defined in the plan. Conduct the QA review of the acceptance and/or regression test report using the Acceptance and/or Regression Report QA Checklist (see 5 FAH-5 Exhibit H-417(6)).
Project Plan	The project plan is updated after the detailed design is finalized. QA's review of the project plan is similar to that conducted during requirements analysis, although attention should be focused on the planned detailed

	design activities.

5 FAH-5 H-418 AND H-419 UNASSIGNED

(TL:ITS-1; 02-13-2002)

5 FAH-5 EXHIBIT H-412
QA PLAN OUTLINE SAMPLE

(TL:ITS-1; 02-13-2002)

INTENDED USE: The Quality Assurance (QA) plan describes the activities to be performed during system development to ensure correctness, reliability, usability and maintainability of the system. The QA plan describes the quality management approach and procedures to insure product quality throughout the implementation phase and the configuration management approach for managing and controlling the system configuration.

INTERRELATIONSHIP: The system requirements document and system performance specification drive this plan. The QA plan drives the programming, practices, standards and procedures manual and programmer's manual. The manufacturing plan must be in conformance with the QA plan**.**

CONTROL GATE: Draft—Project Initiation Review (PIR), Final—Critical Design Review (CDR)

1.0 Introduction—Provide brief overview of effort and any complexity or risks.

1.1 Purpose—State the purpose as to why you are conducting QA in order to provide management with the appropriate reporting process for projects and the quality of the product being built.

1.2 Scope—Summarize what the plan will include.

1.3 Goals—State what you expect to accomplish with this plan.

1.4 Roles And Responsibilities—Name the persons performing QA and their areas of responsibility.

1.5 QA Standards and/or Procedures—Summarize the standards and process used to ensure the quality of product to be delivered and to set the stage for measurement.

2.0 Control Gates and/or Activities—Provide dates and schedules for assessing the results and what is expected before moving on to the next phase of development.

2.1 Project Plan—State how QA section of the plan is complete and in compliance with established standards and procedures.

2.1.1 QA Group Concurrence—Display the process by which the QA manager and team reach concurrence in regards to the project plan and schedule. This will assist the group with planning reviews and activities.

2.1.2 CM Impact—State the ways QA may affect possible change control during review and/or activities.

2.2 Metrics—State how the planned QA process will determine that the quality level expected is the quality level that will be met as the final result. Show how quality can be measured by way of performance-based standards.

2.3 Walkthroughs and Reviews—Summarize scheduled walkthroughs and reviews and the activities that will be evaluated.

2.3.1 Participate in walkthroughs

2.3.2 Conduct QA reviews

2.3.3 Conduct independent reviews

2.3.4 Identify deviations and/or noncompliance

2.3.5 Document findings

3.0 Deliverables

3.1 Project plan

3.2 Documentation

3.3 Metrics report

3.4 Discrepancy report

3.5 Independent review report

5 FAH-5 EXHIBIT H-414
QUALITY ASSURANCE LIFE CYCLE MANAGEMENT

(TL:ITS-1; 02-13-2002)

MSP/Period	Traditional System Life Cycle Phase	Purpose
Study	Project Initiation	—SDR/SCR —Risk analysis —Feasibility study —Benefit and/or cost analysis —Project plan —Quality assurance plan
	Requirements Analysis	—Functional requirements specs —Acceptance criteria —Functional requirements review —Project plan
	Preliminary Design	—System and/or subsystem specification —Preliminary design review (PDR) —Project plan
Acquisition	Detailed Design	—Program specification —System test plan —Conversion plan —Acceptance and/or regression test plan —Training plan —Contingency planning component document —Installation plan —Critical design review (CDR) —Project plan
Operations and Maintenance	Implementation	—User manual —Operations manual —System administration manual —Program maintenance manual —System test report —Acceptance and/or regressionest report —Project plan

5 FAH-5 EXHIBIT H-415(1) ASSESSMENT REQUEST (AR) AND/OR CHANGE REQUEST (CR) QA CHECKLIST

(TL:ITS-1; 02-13-2002)

AR and/or CR QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope describes the document content and indicates any specific limitations and/or omissions?			
7. References include all (and only) those that appear in SCR?			
8. Acronyms include all (and only) those that appear in the SCR?			
9. System purpose stated?			
10. Functional (user) requirements addressed?			
11. System operation (preliminary) described?			
12. Potential system users identified?			
13. Inputs addressed?			
14. Outputs addressed?			

15. System architecture (preliminary) shown?			
16. Security requirements (initial) addressed?			
17. Preliminary hardware support requirements (computers, modems, etc.) addressed?			
18. Preliminary software support requirements (language, DBMS, other GOTS, COTS) addressed?			
19. Preliminary data storage requirements (initial and growth) addressed?			
20. Interfacing systems identified?			
21. Non-functional (performance) requirements (response time, transmission times, etc.) addressed?			
22. Conversion activities addressed?			
23. Sponsor provided personnel (preliminary) identified?			
24. Sponsor provided equipment (preliminary) identified?			
25. Initial sponsor required schedule identified?			
26. Initial sponsor budget, cost estimate, and/or funding limit identified?			
27. AR and/or CR completed, including signatures?			

5 FAH-5 EXHIBIT H-415(2)
RISK ANALYSIS QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Risk Analysis QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope describes the document content and indicates any specific limitations and/or omissions?			
7. References include all (and only) those that appear in the risk analysis?			
8. Acronyms include all (and only) those that appear in the risk analysis?			
9. System functionality, operation described?			
10. System physical environment described?			
11. User physical environment described?			
12. DS/CIS/ACD participation confirmed?			
13. DS/CIS/ACD security requirements addressed?			
14. DS/CIS/CMP participation confirmed?			

15. DS/CIS/CMP security requirements addressed?			
16. Unauthorized system access addressed?			
17. Manual checks and controls addressed?			
18. Facility operating procedures addressed?			
19. Application software failure addressed?			
20. Operating system failure addressed?			
21. Communication system failure addressed?			
22. Application unique threats addressed?			
23. Safeguard for each threat identified?			
24. Cost of each safeguard estimated?			

5 FAH-5 EXHIBIT H-415(3)
FEASIBILITY STUDY QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Feasibility Study QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the feasibility study?			
8. Acronyms include all (and only) those that appear in the feasibility study?			
9. System functional and performance requirements presented?			
10. Study assumptions and constraints identified?			
11. Study methodology described?			
12. Study evaluation criteria for comparative analysis defined?			
13. Existing system analyzed?			

14. Analyses of alternatives address identical system characteristics?			
15. Comparative analysis of technical and benefit and/or cost aspects performed?			
16. Proposed system (or change) identified?			
17. Selection rationale presented?			
18. Development schedule presented?			
19. Development schedule consistent with LCM?			
20. Reviewed and approved by senior management?			

5 FAH-5 EXHIBIT H-415(4)
BENEFIT COST ANALYSIS QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Benefit/Cost Analysis QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope describes the document content and indicates any specific limitations and/or omissions?			
7. References include all (and only) those that appear in the benefit and/or cost analysis?			
8. Acronyms include all (and only) those that appear in the benefit and/or cost analysis?			
9. System functional and performance requirements presented?			
10. BCA assumptions and constraints identified?			
11. BCA methodology described?			
12. BCA evaluation criteria for comparative analysis defined?			
13. Existing system analyzed?			
14. Are alternative systems described?			

15. Are alternatives identical to those in the feasibility study?			
16. Are all identified alternatives analyzed?			
17. Does analyses of alternatives address identical cost issues?			
18. Does cost analyses address both non-recurring and recurring costs?			
19. Does benefits analyses address both non-recurring and recurring benefits?			
20. Does comparative analyses include all alternatives?			
21. Does sensitivity analyses include all alternatives?			
22. Has the project been reviewed and approved by senior management?			

5 FAH-5 EXHIBIT H-415(5)
PROJECT PLAN QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Project Plan QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains the intent of the document and not the system?			
6. Scope describes the document content and indicate any specific limitations and/or omissions?			
7. References include in the documents mentioned in the project plan?			
8. Acronyms include all (and only) those that appear in the project plan?			
9. State Department project management personnel responsibilities defined?			
10. Contractor project personnel responsibilities defined?			
11. Sponsor and/or user personnel responsibilities defined?			
12. Responsibility definitions consistent among State Department project management, contractor, and sponsor/user personnel?			

13.	Responsibility and schedule for updating project plan specified?			
14.	Project management interfaces defined, including interfaces to senior Department of State management, sponsor and/or user, contractors, subcontractors, and independent organizations (for testing, verification, etc.)?			
15.	Internal project management structure shown with clear lines of authority and communication?			
16.	Internal project management structure includes software engineering, are quality assurance, configuration management, and security functions?			
17.	Internal management structure identifies responsible individuals for each structure element?			
18.	Risk (security) management procedures and responsible individual identified?			
19.	Reporting procedures for project monitoring and control specified, including format, frequency, and distribution?			
20.	Programming language(s) identified and Programming Guidelines Manual or other standard specified?			
21.	Support software (operating systems, tools, word processing, etc.) identified?			
22.	Off-the-shelf applications software identified?			
23.	Deviations from cited Department of State policies, standards, and procedures identified and described?			
24.	Project schedule shows all LCM phases?			
25.	Project schedule shows relationships (dependencies) among phases and start/stop dates for each phase?			

26. Project schedule shows dependencies on external events?			
28. Project schedule shows phase transition reviews, deliverables, baselines, and approvals?			
29. Project total and monthly staff budgets equal sum of LCM phase budgets?			
30. Project total and monthly resource budgets equal sum of all LCM phase budgets?			
31. Phase schedule shows relationships (dependencies) among phase activities and start and/or stop dates for each activity?			
32. Phase schedule shows dependencies on external events?			
33. Phase schedule shows reviews, non-deliverable products, deliverables, new baselines, and approvals?			
34. Phase schedule consistent with project schedule?			
35. Each phase activity uniquely identified, work and products described, and appears on phase schedule once and only once?			
36. Total phase staff months and staff loading by month specified?			
37. Total phase resource requirements for computer time, support software, computer hardware, facilities, travel, and maintenance specified by month?			
38. Phase staff allocated by activity?			
39. Phase resources allocated by activity?			

5 FAH-5 EXHIBIT H-415(6) FUNCTIONAL REQUIREMENTS SPECIFICATION QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Functional Requirements Specification QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the FRS?			
8. Acronyms include all (and only) those that appear in the FRS?			
9. Is the requirement clear?			
10. Is the requirement verifiable (testable)?			
11. Is the requirement traceable?			
12. Is the requirement annotated (prioritized)?			
13. Does each TBD (if any) indicate why it exists and what must be done to eliminate it?			

14. Is the FRS thorough as a whole considering all sections and subsections?			
15. Is the FRS consistent as a whole considering all sections and subsections?			
16. Is the FRS modifiable as a whole considering all sections and subsections?			
17. Is the FRS relevant as a whole considering all sections and subsections?			
18. Are performance and/or efficiency requirements addressed?			
19. Are reliability requirements addressed?			
20. Are security requirements addressed?			
21. Are maintainability requirements addressed?			
22. Are portability requirements addressed?			

5 FAH-5 EXHIBIT H-415(7)
ACCEPTANCE CRITERIA QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Acceptance Criteria QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses the FRS?			
7. References include all (and only) those that appear in the acceptance criteria document?			
8. Acronyms include all (and only) those that appear in the acceptance criteria document?			
9. Is the acceptance criterion clear?			
10. Is the acceptance criterion verifiable (testable)?			
11. Is the acceptance criterion traceable, by FRS reference number, to one or more requirements?			
12. Is the acceptance criterion annotated (prioritized) consistently with its referenced requirements?			
13. Is there an acceptance criterion "place holder" for each TBD (if any) in the FRS?			

14.	Is the acceptance criteria document thorough as a whole considering all sections and subsections, i.e., does the acceptance criteria document address every requirement in the FRS?			
15.	Is the acceptance criteria document consistent, as a whole considering all sections and subsections, i.e., is each acceptance criterion consistent with the requirement(s) to be tested?			
16.	Is the acceptance criteria document modifiable as a whole considering all sections and subsections?			
17.	Is the acceptance criteria document relevant as a whole considering all sections and subsections?			

5 FAH-5 EXHIBIT H-415(8) SYSTEM/SUBSYSTEM SPECIFICATION QA CHECKLIST

(TL:ITS-1; 02-13-2002)

System/Subsystem Specification QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the SSS?			
8. Acronyms include all (and only) those that appear in the SSS?			
9. Does the SSS include an overview of the preliminary design?			
10. Does the SSS address the support software that is needed to implement the design?			
11. Does the SSS address the hardware that is needed to implement the design?			

12 Does the SSS address the communications capabilities that are needed to implement the design?			
13. Does the SSS address each requirement included in the FRS?			
14. Is the component coupling requirement specified?			
15. Is the component identification unique?			
16. Is the component type specified?			
17. Is the component purpose specified?			
18. Is the component function specified?			
19. Are the component subordinates specified?			
20. Are the component dependencies specified?			
21. Are the component interfaces specified?			
22. Are the component resources specified?			
23. Are the component cohesion specified?			

5 FAH-5 EXHIBIT H-416(1) PROGRAM SPECIFICATION QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Program Specification QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the PS?			
8. Acronyms include all (and only) those that appear in the PS?			
9. Does the PS contain an overview of the system-operating environment, including the hardware, support software, system interfaces, and security and privacy constraints?			
10. Does the PS contain a list of all the programs in the specification?			
11. Is the program identification identical to a component identification in the SSS?			

12. Has the program coupling requirement been met?			
13. Is the module identification unique?			
14. Is the module type specified?			
15. Is the module purpose specified?			
16. Is the module function specified?			
17. Are the module subordinates specified?			
18. Are the module dependencies specified?			
19. Are the module interfaces specified?			
20. Are the module resources specified?			
21. Is the module processing specified?			
22. Is the module data specified?			
23. Has the module cohesion requirement been met?			
24. Is the module test identification unique?			
25. Does the module test description include type, purpose, and reference to specific functions being tested?			
26. Does the module test assumptions identify testing prerequisites outside the control of the tester?			
27. Does the module test initialization identify testing prerequisites that are within the control of the tester?			
28. Does the module test instrumentation identify test support tools and techniques?			
29. Are module test limitations identified?			
30. Are module test inputs specified?			
31. Are module test anticipated outputs			

	specified?			
32.	Are module test output assessment methods specified?			
33.	Is the integration test identification unique?			
34.	Does the integration test description include type, purpose, and reference to specific functions being tested?			
35.	Do the integration test assumptions identify testing prerequisites outside the control of the tester?			
36.	Does the integration test Initialization identify testing prerequisites that are within the control of the tester?			
37.	Does the integration test Instrumentation identify test support tools and techniques?			
37.	Does the integration test Instrumentation identify test support tools and techniques?			
38.	Are integration test limitations identified?			
39.	Are integration test Inputs specified?			
40.	Are integration test anticipated outputs specified?			
41.	Are integration test output assessment methods specified?			
42.	Are integration test data compatibility tests specified?			
43.	Are integration test call compatibility tests specified?			
44.	Are integration test path coverage tests specified?			
45.	Are integration test entry and/or exit			

coverage tests specified?			

5 FAH-5 EXHIBIT H-416(2)
SYSTEM TEST PLAN QA CHECKLIST

(TL:ITS-1; 02-13-2002)

System Test Plan QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and acronyms?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the system test plan?			
8. Acronyms include all (and only) those that appear in the system test plan?			
9. Does the system test address all PS specifications?			
10. Is the system test identification unique?			
11. Does the system test description include type, purpose, and reference to specific functions being tested?			
12. Do the system test assumptions identify testing prerequisites outside the control of the tester?			

13. Does the system test initialization identify testing prerequisites that are within the control of the tester?			
14. Does the system test instrumentation identify test support tools and techniques?			
15. Are system test limitations identified?			
16. Are system test inputs specified?			
17. Are system test anticipated outputs specified?			
18. Are system test output assessment methods specified?			
19. Are system test data compatibility tests specified?			
20. Are system compatibility tests specified?			
21. Are system test path coverage tests specified?			
22. Are system test entry and/or exit coverage tests specified?			

5 FAH-5 EXHIBIT H-416(3)
CONVERSION PLAN QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Conversion Plan QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and acronyms?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the conversion plan?			
8. Acronyms include all (and only) those that appear in the conversion plan?			
9. Is the hardware configuration described?			
10. Is the system support software (operating system, utilities, vendor provided applications) described?			
11. Is the application (i.e., project developed) software described?			
12. Are the files and databases described?			

13. Are special conversion difficulties described and a method presented for their resolution?			
14. Is security and privacy requirements addressed and are they consistent with the FRS?			
15. Is the status of all system documentation presented?			
16. Are user procedures described?			
17. Is the physical location(s) of the hardware described?			
18. Are the major system functions and their processing modes (e.g., on line, batch) described?			
19. Are the system conventions and standards described?			
20. Are the system communications methods (protocols, software packages, etc.) described?			
21. Are the user and operations personnel (and their number) described?			
22. Are the constraints on conversion, including their impact on user support, described?			
23. Is the conversion methodology (parallel processing, phased implementation, etc.) described?			
24. Are the conversion schedule and resource requirements consistent with the project plan?			

5 FAH-5 EXHIBIT H-417(1)
USER MANUAL QA CHECKLIST

(TL:ITS-1; 02-13-2002)

User Manual QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the user manual?			
8. Acronyms include all (and only) those that appear in the user manual?			
9. Has traceability between the user manual and program description been established?			
10. Is the function's purpose defined?			
11. Is the function's setup defined?			
12. Are the function's inputs defined?			
13. Are the function's consequences identified and described?			
14. Are the function's suspension and/or termination processes defined?			

15. Are the function's outputs defined?			
16. Are the function's error conditions identified and described?			

5 FAH-5 EXHIBIT H-417(2)
OPERATIONS MANUAL QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Operations Manual A Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the user manual?			
8. Acronyms include all (and only) those that appear in the user manual?			
9. Has traceability between the operations manual and program description been established?			
10. Is the run's purpose defined?			
11. Is the run's progression defined?			
12. Are the run's control inputs defined?			
13. Is the run's operating information presented?			

14. Are the run's input and/or output files described?			
15. Are the run's reports described?			
16. Are the run's non-routine procedures described?			

5 FAH-5 EXHIBIT H-417(3)
SYSTEM ADMINISTRATION MANUAL QA CHECKLIST

(TL:ITS-1; 02-13-2002)

System Administration Manual QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the user manual?			
8. Acronyms include all (and only) those that appear in the user manual?			
9. Is system initiation addressed?			
10. Is parameter data maintenance addressed?			
11. Is cyclic system use addressed?			
12. Is data base management addressed?			

13. Is system access and security addressed?			
14. Are special supplies addressed?			
15. Is general system usage addressed?			
16. Is the contingency environment addressed?			

5 FAH-5 EXHIBIT H-417(4)
PROGRAM MAINTENANCE MANUAL QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Program Maintenance Manual QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the user manual?			
8. Acronyms include all (and only) those that appear in the user manual?			
9. Has traceability between the program maintenance manual and program description been established?			
10. Is the identification of the component identical to one in the program specification?			

11. Is the component's description provided?			
12. Are the component's subcomponents identified?			
13. Are the component's inputs identified?			
14. Is the component's processing described?			
15. Are the component's outputs described?			
16. Are the component's Interfaces described?			
17. Are the component's tables described?			
18. Is the component's run description provided?			

5 FAH-5 EXHIBIT H-417(5)
SYSTEM TEST REPORT QA CHECKLIST

(TL:ITS-1; 02-13-2002)

System Test Report QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the system test report?			
8. Acronyms include all (and only) those that appear in the system test report?			
9. Has traceability between the system test plan and system test report been established?			
10. Is the identification for each system test unique?			
11. Are the deviations (if any) described?			
12. Are the results of the system test presented?			

13. Is an assessment of the system test result made by comparison with the anticipated output?			
14. Is an evaluation of the readiness of the system for acceptance and/or regression test presented?			

5 FAH-5 EXHIBIT H-417(6) ACCEPTANCE AND/OR REGRESSION TEST REPORT QA CHECKLIST

(TL:ITS-1; 02-13-2002)

Acceptance/Regression Test Report QA Checklist	Yes	No	Note
1. Title page includes title, date, office symbol, and revision notice or version identifier?			
2. Preface describes the content and intended audience?			
3. Table of contents shows chapter titles, major sections, and page numbers?			
4. Introductory chapter includes purpose, scope, references, and page numbers?			
5. Purpose explains intent of document (not system)?			
6. Scope addresses general system functions, inputs and outputs, and external interfaces?			
7. References include all (and only) those that appear in the acceptance and/or regression test report?			
8. Acronyms include all (and only) those that appear in the acceptance and/or regression test report?			
9. Has traceability between the acceptance and/or regression test plan and system test report been established?			
10. Is the Identification for each acceptance and/or regression test unique?			
11. Are the deviations (if any) described?			

12. Are the results of the acceptance and/or regression test presented?			
13. Is an assessment of the acceptance and/or regression test result made by comparison with the anticipated output?			
14. Is an evaluation of the readiness of the system for installation and operation presented?			